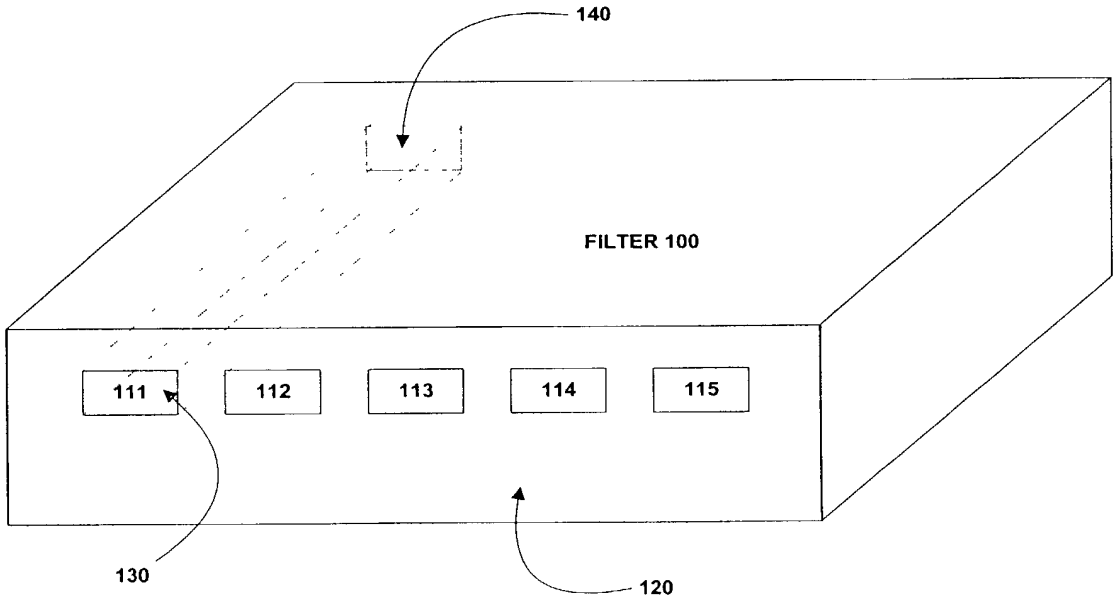


FIGURE 1

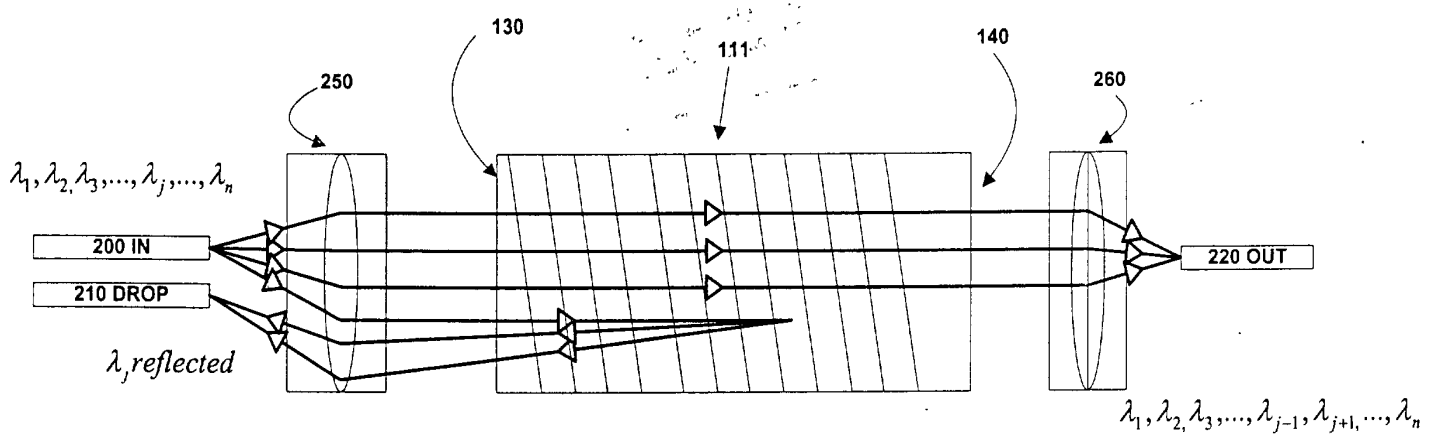


FIGURE 2

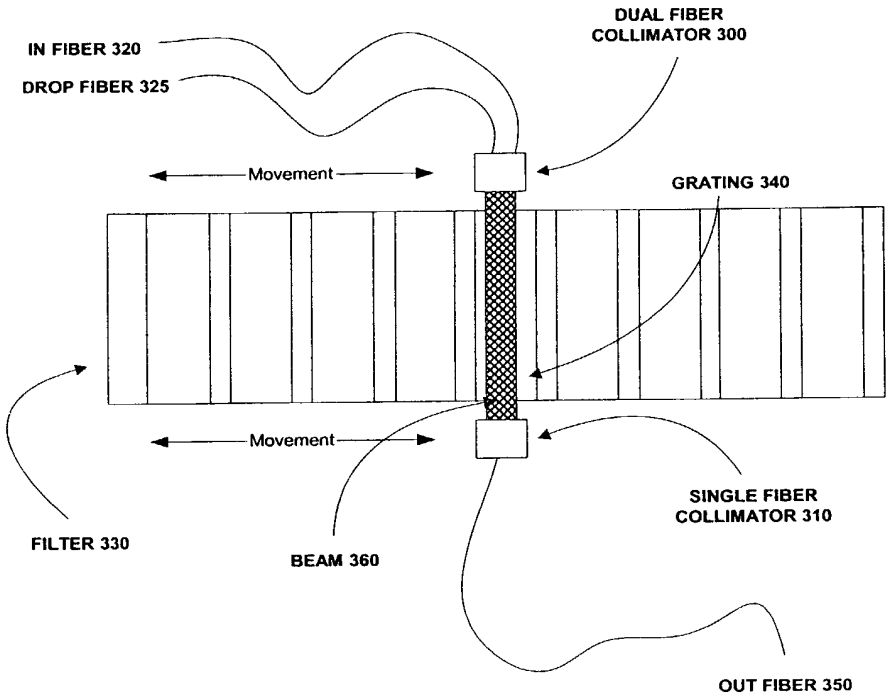


FIGURE 3

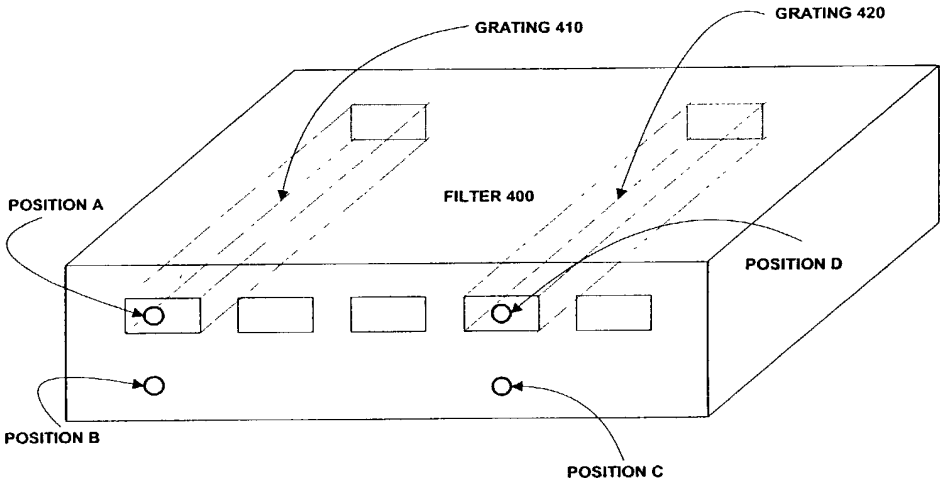


FIGURE 4

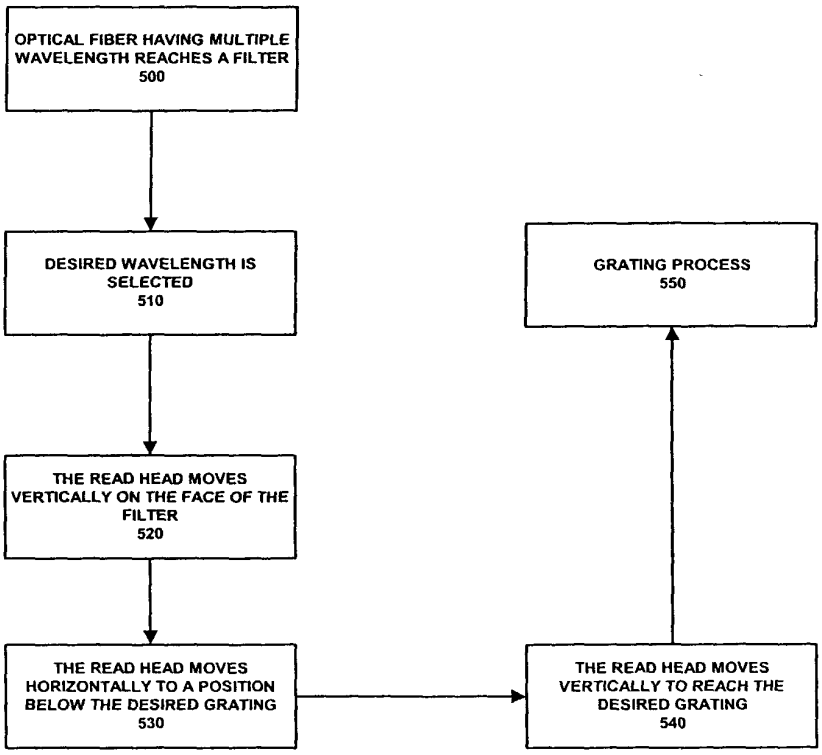


FIGURE 5

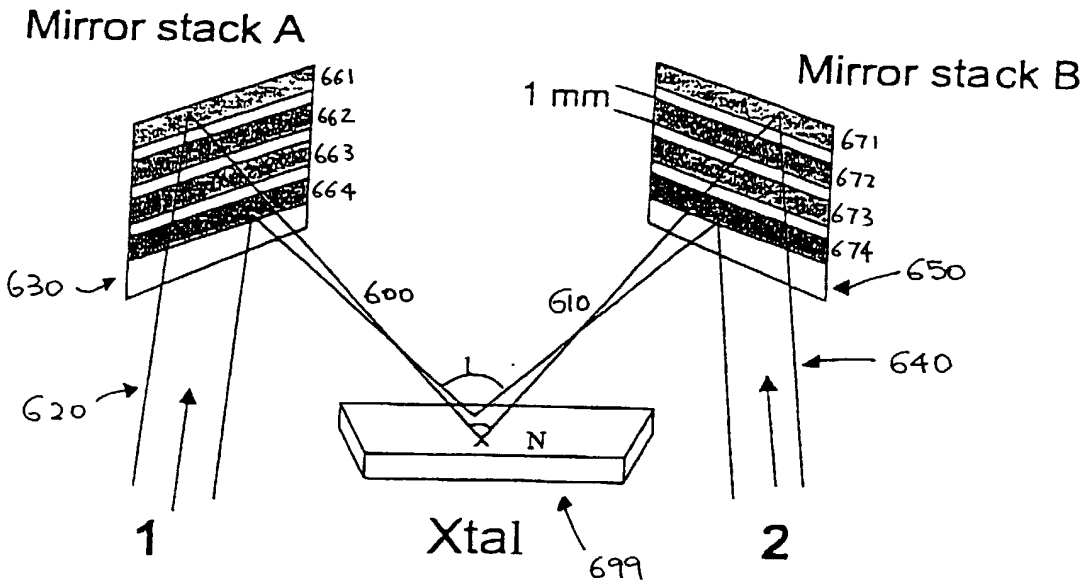


FIGURE 6

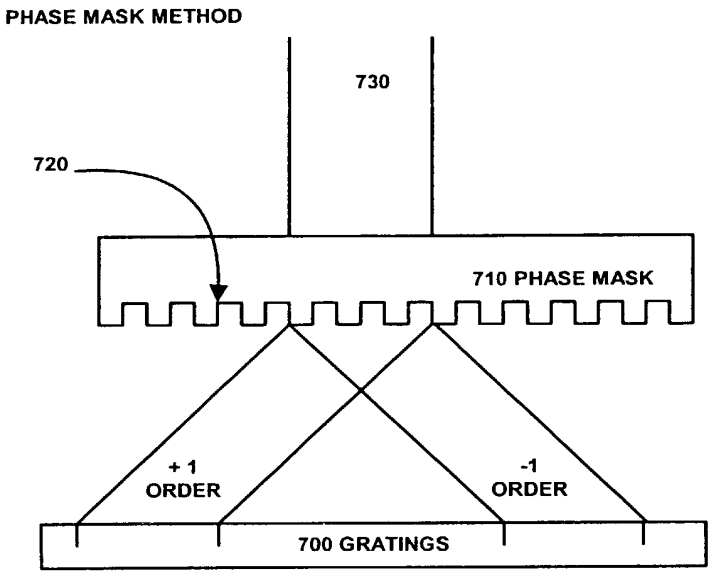
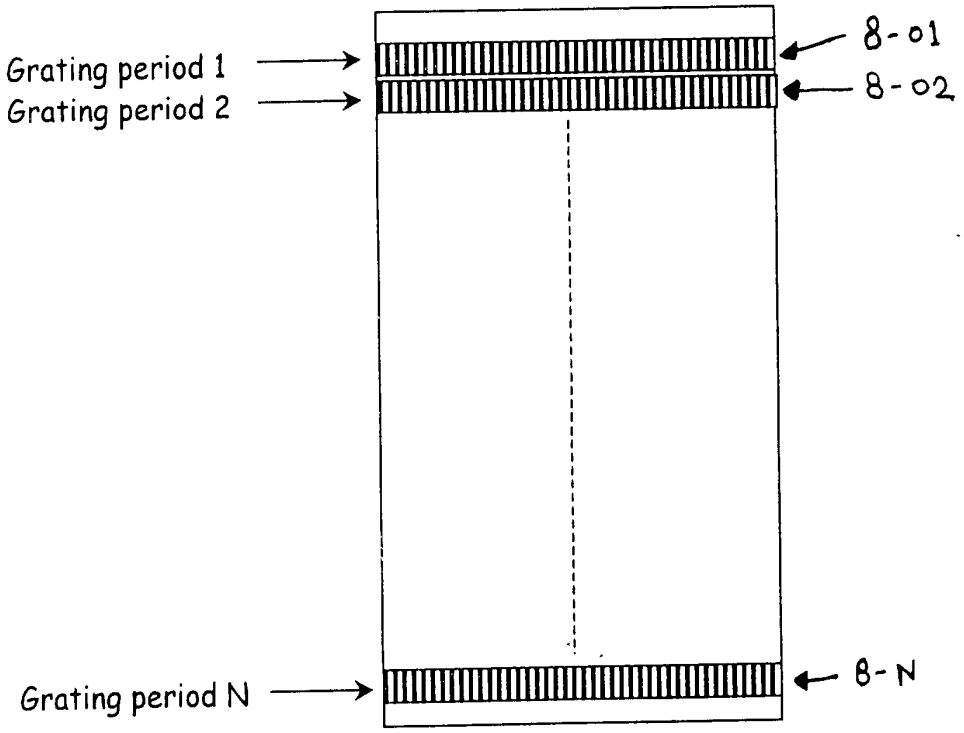


FIGURE 7

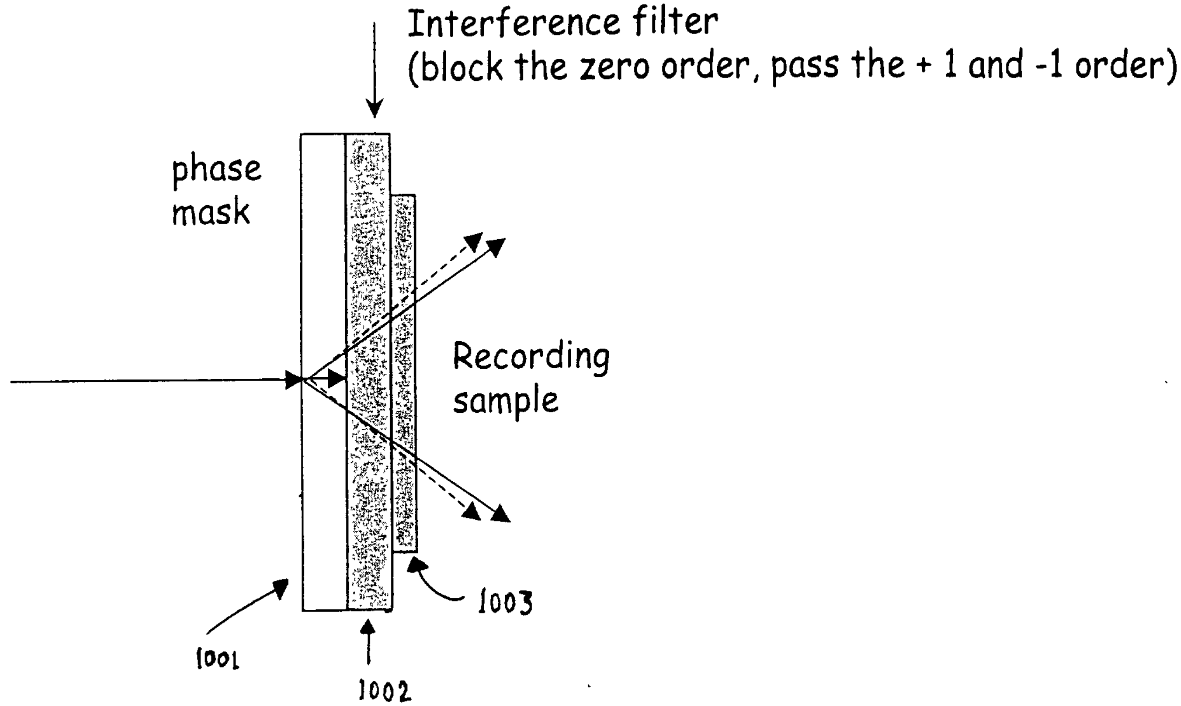
a



Phase mask Top view

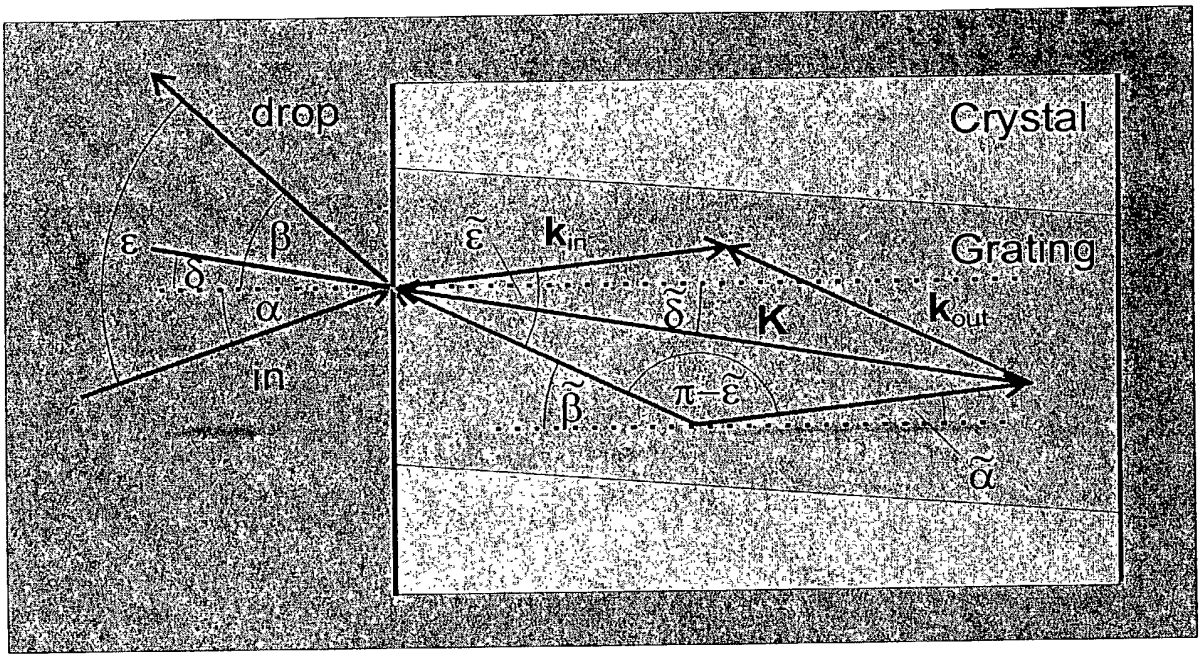
FIGURE 8

C



Near field recording

FIGURE 10



$\tilde{\alpha}$ = input beam in the crystal; α = input beam in air

$\tilde{\beta}$ = output beam in the crystal; β = output beam in air;

$\tilde{\varepsilon}$ = full angle between the read out beams in the crystal;

ε = full angle between the read out beams in air;

$\tilde{\delta}$ = slant angle of the grating vector in the crystal at room temperature;

$\tilde{\delta}^{H}$ = slant angle of the grating vector in the crystal at $180\ ^{\circ}C$;

δ = slant angle of the dual fiber collimator;

$\mathbf{K}$ = grating vector; $\mathbf{k}_{in}$ *and* $\mathbf{k}_{out}$ = wave vectors (in and out);

Λ_G = grating period of the refractive index pattern at room temperature;

Λ_G^H = grating period of the refractive index pattern at $180\ ^{\circ}C$;

Λ_P = grating period of the phase mask;

λ_R = read out wavelength

n_R = refractive index for infrared light

$a_z = 4.5 \cdot 10^{-6} K^{-1}$; $a_y = 1.5 \cdot 10^{-5} K^{-1}$; thermal expansion koefficients

$T_R = 25^{o}$C, read out temperature; $T^{H}{}_{R} = 180^{o}$C, recording temperature; $\Delta T = 155K$;

FIGURE 11

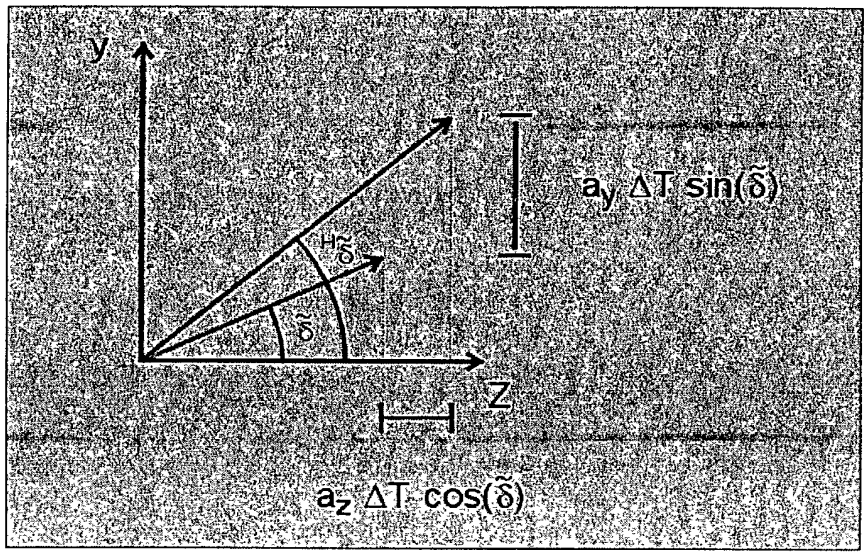


FIGURE 12

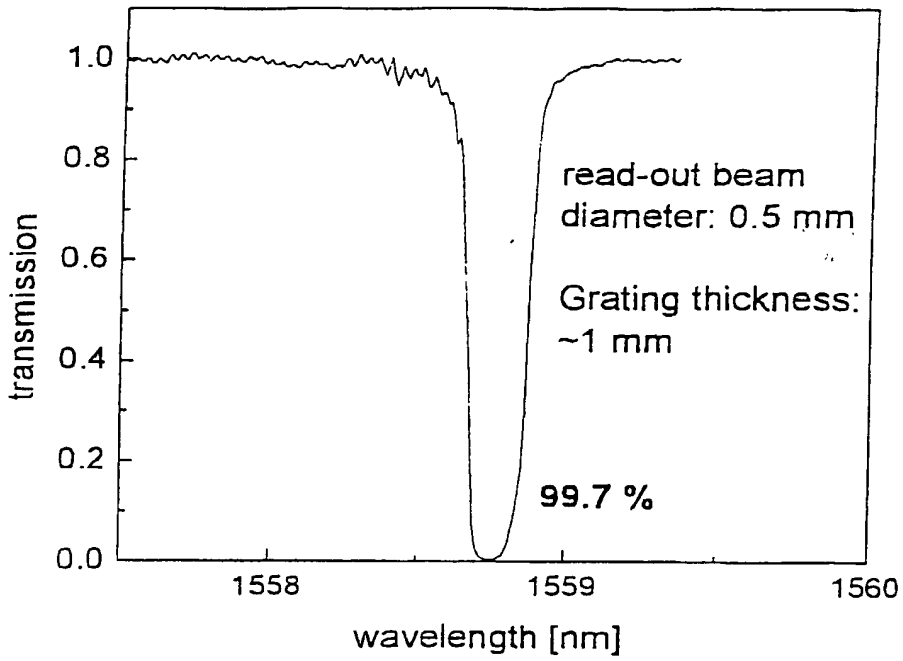


FIGURE 13

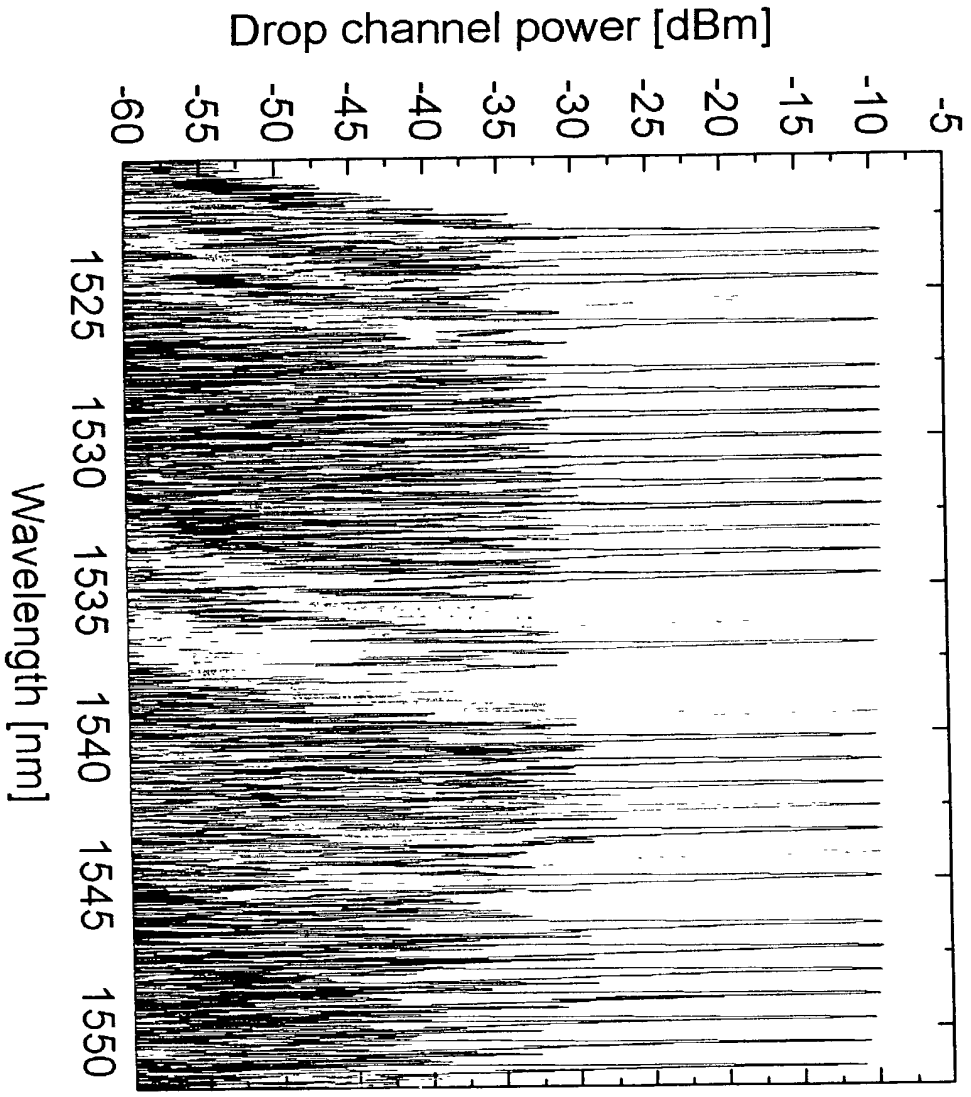


FIGURE 14